



E1941  
JACC April 5, 2011  
Volume 57, Issue 14



## TRENDS IN RENAL COMPLICATION RATES AMONG MEDICARE BENEFICIARIES UNDERGOING PCI: FISCAL YEARS 2006 THROUGH 2008

i2 Poster Contributions

Ernest N. Morial Convention Center, Hall F

Monday, April 04, 2011, 3:30 p.m.-4:45 p.m.

Session Title: Outcomes/Operator Volume/Public Reporting/Guidelines

Abstract Category: 4. Outcomes/Operator Volume/Public Reporting/Misc. Topics/Guidelines

Session-Poster Board Number: 2515-561

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**Background:** Enhanced attention has focused on contrast induced nephropathy among patients undergoing PCI. This study reports three year trends in the rate of renal complications among Medicare Beneficiaries (MB) undergoing PCI.

**Methods:** A retrospective analysis was conducted using annual MedPar data files for fiscal years (FY) 2006 through 2008. The study sample consists of 1,108,222 Medicare Beneficiaries (MB) undergoing a PCI without CABG or valve surgery. ICD-9-CM procedure and diagnosis codes were used to identify the outcomes of interest as well as the co-morbidities for risk-adjustment. PCI hospitalizations were reported as either elective PCI or PCI with primary STEMI or cardiogenic shock. Separate multivariate logistic regression models were estimated to calculate annual risk-adjusted outcomes ((expected rate - observed rate) + the mean of the subset population).

**Results:** The table indicates that MBs in both sub-populations were more likely to experience each of the risk-adjusted renal outcomes reported during FY-2008 than FY-2006 or FY-2007. For example, MBs were 1.7 times more likely to experience new onset hemodialysis in FY-2008 compared to FY-2006 in the elective PCI group.

**Conclusion:** The current trends in renal complications suggest the current focus on contrast induced nephropathy to reduce renal complications is warranted among MB.

	2006	2007	2008
Elective PCI			
Medicare Beneficiaries	344,944	303,302	312,377
Observed Acute Renal Failure (ARF)	2.87%	3.39%	4.55%
Risk-adjusted ARF	3.28%	3.15%	4.32%
Observed New Onset Hemodialysis	0.53%	0.52%	0.86%
Risk-Adjusted New Onset Hemodialysis	0.50%	0.57%	0.86%
Observed Mortality Rate	0.78%	0.81%	1.02%
Risk-adjusted Mortality Rate	0.80%	0.77%	1.03%
Non-elective PCI (Primary STEMI or Cardiogenic Shock)			
Medicare Beneficiaries	50,274	46,620	50,705
Observed Acute Renal Failure (ARF)	7.13%	7.93%	9.77%
Risk-adjusted ARF	7.55%	7.64%	9.62%
Observed New Onset Hemodialysis	0.33%	0.41%	0.52%
Risk-Adjusted New Onset Hemodialysis	0.37%	0.38%	0.50%
Observed Mortality Rate	7.38%	7.56%	7.24%
Risk-adjusted Mortality Rate	7.62%	8.15%	6.46%